Professor Gitai Yahel

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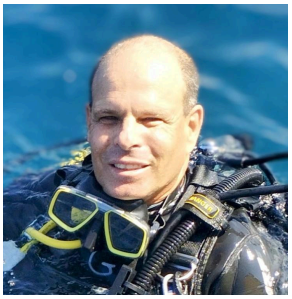
Curriculum Vitae



1. Personal Details

Permanent Home Address**:** Hamifras 16. St.
Kfar-Vitkin, 40200, Israel
Mobile: +972 (52) 291 8007
Email: Yahel@Ruppin.ac.il
Website: https://www.ruppin.ac.il/en/Gitai-Yahel-Lab/

2. Higher Education

A. Undergraduate and Graduate Studies

Period of study	Name of institution, department, and host	Degree	Year of completion
1998-2004	The Hebrew University of Jerusalem (HUJI), Department of Ecology, Systematics, and Evolution, and the Interuniversity Institute for Marine Sciences in Eilat (IUI), Advisor: Prof. Amatzia Genin	**Ph.D.** with distinction	2004
1995-1997		**M.Sc**. with distinction	1998
1991-1995	Hebrew University of Jerusalem (HUJI) Faculty of Mathematics and Sciences Biology - major, Statistics – minor	**B.Sc.** With Distinction	1995

B. Post-Doctoral studies

Period of study	Name of institution, department, and host
2003-2006	Rothschild Postdoctoral fellowship Biology Department, University of Victoria (UVic), British Columbia, Canada. Host: Prof. Verena Tunnicliffe.

3. Academic Ranks and Tenures in Institutes of Higher Education

Dates	Name of institution and department	Rank / Position
2023-Present	Faculty of Marine Science, Ruppin Academic Centre, Israel	Full professor
2016- 2022		Associate Professor
2008-2016		Senior Lecturer
2007-2008		Lecturer

4. Scholarly Positions and Activities outside the Institution

A. Community contribution and outreach

- 2021-present Editorial board of Frontiers in Marine Science as a review editor for Marine Biology
- 2021- 2023: National Advisory Committee for Israel Water Authority - The Fate of Wastewater Surpluses in Israel
- 2020-2021: National Steering Committee for Israel Marine Science – Israeli Academy of Sciences and Humanities
- 2019-present: Member of the scientific diving committee of the Interuniversity Institute in Eilat
- 2017-Present: Scientific committee Mediterranean Sea Research Center of Israel (MERCI)
- 2015 – Present: Head of the scientific diving committee of the Faculty for Marine Science in Michmoret
- 2010-Present: EcoOcean marine science advisor and scientific committee
- 2009-2019: BASHAAR – Academic Outreach activity in High schools at the periphery
- 2009-2014: EcoOcean board member

B. Membership in professional/scientific societies

Since 1996 - American Society of Limnology and Oceanography
Since 2008 – Israeli Association of Aquatic Sciences
Since 2013 - Israeli Microbiology Society

C. Reviewer for (among others): Aquatic Biology, Aquaculture Research, Frontiers in Marine Science, BMC Physiology, Bulletin of Marine Science, Diversity and Distribution, Ecosystems, FEMS Microbiology Letters, Limnology and Oceanography, Limnology and Oceanography Methods, PLOS ONE, Marine Ecology Progress Series, NSF, ISF, MOST

E. *Participation in Research cruises*
(>80 Oceanographic cruises, of which I served as Chief Scientist on >70):

2020- 2023 R/V Bat Galim - Haifa Cross shore transect (10 cruises)

2007-2019 R/V Mediterranean Explorer - Oceanography of the Israeli Eastern Mediterranean Shelf (62 cruises)

Oct. 2013 CCGS Vector + ROPOS, Straits of Georgia Glass sponge reef

Oct. 2010 M/V Ares and ROV Ramora – Cross shelf survey of the deep Israeli continental slope (Eastern Mediterranean)

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Oct. 2007 CCGS Vector + ROPOS, Straits of Georgia Glass sponge reef

Feb. 2006 CCGS J.P. Tully + ROPOS, VENUS deployment, Saanich Inlet

July 2005 CCGS J.P. Tully + ROPOS, BETHOS05, Fraser Ridge Glass sponge reefs

Nov. 2004 CCGS Vector + ROPOS, Fraser Ridge Glass sponge reef

Jul. 2004 CCGS J.P. Tully + ROPOS, Glass sponges at Barkley Sound

Sep. 2003 R/V Thomas G. Thompson + ROPOS, NEMO 2003 to Axial Seamount Hydrothermal Vents,

Sep. 2000 King Snefro IV (National Geographic Society), Red Sea

Nov. 1998 R/V Sea-Surveyor, The Seychelles, Indian Ocean

Aug. 1997 R/V Sue-Allen, Gulf of Aqaba

Aug. 1996 R/V University I, Gulf of Aqaba

6. Participation in scholarly conferences

(last five years)

Date	Name of Conference	Place of conference	Subject of lecture/discussion	Role
2018	Particles in Europe 2018	Lisbon, Portugal	Biological activity: an overlooked mechanism for sediment resuspension, transport, and modification in the ocean	Presenter
2019	Red Sea Marine Ecosystems Under Environmental and Anthropogenic Changes	Eilat, Israel	Benefits and lessons from 20 years of in situ studies of suspension feeders' nutrition and metabolism	Presenter
2021	ASLO Aquatic Sciences	Virtual	Session: Feeding and ecophysiology of marine suspension feeders	organizer and chair
2021	ASLO Aquatic Sciences	Virtual	How do sponge control their pumping?	Presenter
2022	Science and the Environment FlowMar	Tel Aviv DTU, Denmark	Monitoring, modeling, and characterization session Revisiting a century-old hypothesis - the role of DOM in the diet of aquatic animals	Chair Presenter
2023	Filters in Biology + biomimetic (FiBB2023)	Berlin	Biological Filtration at the Micron and Submicron Scale: Recent Advances and Knowledge Gaps	Presenter

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2024	IAAS	Tel Aviv, Israel	Biological filtration at the micron and submicron scale: Recent advances and knowledge gaps	Presenter
2024	New Tools in Oceanography Research	Ashkelon, Israel	Innovation in Marine Biology Research in the Mediterranean Sea	Presenter
2025	9th International Symposium and Thematic School on DEB theory of Metabolic Organization	Heraklion, Greece	Dynamic Energy Budget (DEB) model of the Hard-Shell mussel, Mytilus coruscus Contrasting in situ and lab data	Presenter

7. Research Grants

A. Grants Awarded (active within the last five years)

Role in Research	*Co-researchers*	*Topic*	*Funded by*	*Amount*	*Years*
PI	Liron Goren (TAU)	A First Look at the Composition and Function of Soft-bottom Infaunal Communities of Marine Reserves in the Israeli Mediterranean Sea	Yad Hanadiv - IMPA studies	400,000 NIS	2025-2028
PI	TAU: Liron Goren, Micha Ilan, Noa Shenkar, Omri Bronstein, Shebi Rotman, Tom Shlesinger, Jonathan Belmaker, Yossi Loya, Bar Ilan University: Chana Kranzler, Gal Eyal, Oren Levy, Shai Efroni HUJI: Maoz Fine Haifa University:	Marine Biodiversity Ecological Dynamics: Secrets of the Mediterranean and Red Sea	VATAT	10,000,000 NIS	2025-2028

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CO-PI	Moshe Kiflawi (BGU) Shevy Bat-Sheva Rothman (TAU)	Assessing the ability of marine protected areas to protect fishes on the move within a rapidly warming sea	Yad Hanadiv - IMPA studies	450,000	2025-2028
PI	Tom Topaz Yair Suari (Israel)	Long-term monitoring of the Alexander Estuary	Jewish National Fund (JNF)	723,000 NIS	2023-2026
PI		Revisiting the role of dissolved organic matter, the largest pool of exchangeable carbon in the ocean, as a nutritional source for aquatic metazoans	ISF	1,080,000 NIS	2021-2025
CO-PI	Tom Topaz Yair Suari (Israel)	Applied Research On Coastal Estuaries	Yad Hanadiv	1,600.000 NIS	2021 - 2023
PI	Tom Topaz (Israel)	Science based management of the Kishon Estuary	The Kishon Authority	25,000 NIS	2020 - 2021
CO-PI	T.K. Kiørboe A. Andersen (Denmark) U. Shavit R. Holtzman (Israel)	FLOWMAR: The role of flow in marine life	Styrelsen for Forskning og Uddannelse (Denmark)	111,537 NIS	2019 - 2022

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CO-PI	S. E. Monismith (USA) M. Ribes, R. Coma (Spain)	Role of sponges in biogeochemical benthic-pelagic coupling: carbon and nutrient exchange between the Coraligenous and adjacent communities (Be-Calm)	Ministerio de Ciencia Innovación (Spanish Science Ministry)	700,000 Euro	2019 - 2022
PI	B. Chefetz Y. Suari (Israel)	Long term monitoring of the Alexander Estuary	Jewish National Fund (JNF)	723,000 NIS	2019 - 2022
PI		Assessing the role of invasive bivalves in controlling ecosystem dynamic as a tool for better management of Israeli Marine Reserves and Marine Protected Areas	Yad-Hanadiv +INPA	600,000 NIS	2018 - 2022
PI	E. Ward (USA) S.E. Shumway (USA) U. Shavit (Israel)	Mediation of biological filtration in marine suspension feeders: significance of intrinsic and extrinsic factors	IOS-NSF-BSF	$1,315,000	2018 - 2022
PI	U. Shavit T. Katz T. Treibitz Y. Schaner	Developing new methodologies for quantifying biological sediment resuspension in the sea and for studying its dynamics	Israel Ministry of Science and Technology (MOST)	2,500,000 NIS	2016 - 2019
PI	B. Chefetz R. Egozi G. Eshel S. Gafny Y. Suari (Israel)	The role of estuaries in controlling pollution of the Mediterranean Sea: The Alexander River as a case study	Yad Hanadiv	2,475,000 NIS	2016 - 2019
PI	Yair Suari Ayelet Dadon Pilosof	Ruppin Marine LTER (Long Term Ecological Research) Station at Michmoret	Ruppin Academic Center	204,000 NIS	2014 - 2021
PI	K. R. Sutherland (USA) Y. Tikochinski (Israel)	Interactions between marine picoplankton and mucous-net filter feeders	United States-Israel Binational Science Fund (BSF)	$244,000	2013 - 2018

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PI	-	Examining size-independent biological filtration at the submicron range	Israeli Science Fund (ISF)	1,232.000 NIS	2013 - 2018
PI	S. Gafny Y. Suari (Israel)	Rehabilitation of the micro estuaries along the Mediterranean coast of Israel	Yad Hanadiv	1,084,000 NIS	2013 - 2016
PI	A. Genin, M. Ilan (Is	Study of the deep Israeli Continental margins of the Red and Mediterranean Seas in light of local and global changes (ROV)	Israel Ministry of Science and Technology (MOST)	1,638,000 NIS	2014 – 2017
CO-PI	H.U. Riisgård D. Canfield N. T. Eriksen P. Funch P. S. Larsen J.H.Walther J.E. Meyer T.Fenchel C. Nielsen (Denmark)	Early evolution of multicellular sponges - a bioenergetic and bio-fluid mechanical approach for understanding evolutionary adaptation to animal filter-feeding in the sea	The Villum Foundation grant (Denmark)	800,000 Euro	2015 - 2018

B. Submission of Research Proposals - Not Funded (last five years)

Role in research	*Co-researchers*	*Topic*	*Funded by*	*Year*	*Score*
PI	*Craig E Nelson, Bradley K Fox, Benjamin Müller2, Craig Carlson, Maggie E Sogin (USA)*	*Transformation and removal of dissolved organic matter by filter-feeding metazoans*	*NSF-BSF*	*2023*	*Very high*
PI	M. Ilan (TAU, Israel)	Climate changes impacts on engineering species – sponges as indicators to marine ecosystem functions	Ministry for Protection of the Environment	2022	Rejected on a technical basis
PI	E. Ward S.E. Shumway (USA)	Rethinking biological filtration: Intrinsic versus extrinsic controls on feeding efficiency in marine suspension feeders	NSF-BSF	2017	High
PI	U. Hentchel N. Musat (Germany) L. Staindler (Israel)	The Sponge-Microbe Holobiont - Towards an integrated understanding of metabolism and function within a complex microbial consortium	DIP	2017	High

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PI	Ariel Olsner (Israel)	Monitoring of the Alexander stream and estuary – infrastructure for science-based management	Israeli Landscape fund	2018	Rejected on technical basis
PI	T. S. Oliveira M. Ribeiro (Portugal) U. Shavit T. Katz (Israel)	Novel methodologies for the quantification of sediment resuspension in the ocean	FCT-MOST	2019	??
PI	S. Gafny (Israel)	Science-based management of the Hedera Estuary	Ministry for Protection of the Environment	2019	High
PI	T. Katz U. Shavit (Israel) E. Boss(USA)	Determining the rate and relative contribution of biological resuspension of sediment from the seafloor	NSF-BSF	2019	Fair
PI	T. Katz U. Shavit (Israel) E. Boss(USA)	Quantifying biological resuspension fluxes	NSF-BSF	2021	High

8. Awards, Citations, Honors, Fellowships

- 2003-2004 Rothschild Post-Doctoral Fellowship (KEREN YAD-HANDIV)
- 2013 Ruppin Academic Center – Research Excellence award
- 2014 - 2021, 2023 Ruppin Academic Center – Research and Teaching Excellence award

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9. Teaching

a. Courses taught in recent years

Year	Name of Course	Type of Course	Degree	No. of students
2007-2013	Chemical Oceanography	Lecture (Mandatory)	BSc	90-120
2007 - Present	Biological Oceanography	Lecture (Mandatory)	BSc	90-120
2008 - Present	Oceanographic Cruise	Field + Lab (Mandatory)	BSc	60-120
2008 - Present	Underwater Research Methods	Field + Lab + Lecture (elective)	BSC+MSc	25
2008 - Present	Guided project for outstanding students	Lab and field	BSc	4-6

b. Supervision of Graduate Students

Name of student	Title of Thesis	Degree	Supervised with:	Date of completion	Student's Achievements
Ph.D. Students					
Raz Marom	Sponge Metabolism	PhD	Micha Ilan (TAU)	In Progress	Publications in: Limnology and oceanography, Biological invasions, and Frontiers in Marine Science
Rei Diga	Examining the potential role of dissolved organic matter as a ubiquitous nutritional resource for aquatic suspension feeders	PhD	Amatzia Genin (HUJI)	In Progress	Publications in: Limnology and oceanography, Biological invasions
Tal Amit	An in situ studies of the metabolic strategies of bivalves residing in oligotrophic seas	PhD	Yossi Loya (TAU)	2022	Publications in: Ecology and Frontiers in Marine Science. Best Student Lecture –Zoological Society of Israel, 2021 conference
Yuval Jacobi	Revisiting biological filtration – The role of surface properties in prey capture	PhD	Uri Shavit (Technion) Guy Ramon (Technion)	2022	Publications in Limnology and Oceanography; Nature Microbiology; Marine Biology IUI Ph.D. Award 2018

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Tom Topaz	The role of estuaries in controlling pollution of the Mediterranean Sea: the Alexander as a case study	PhD	Benny Chefetz (HUJI)	2021	MERCI Scholarship 2016 Publications in Environmental pollution, Frontiers in Marine Science, Environmental Science and Technology, Science of the Total Environment Currently Head of the Israeli Estuarine Research Center The Faculty of Marine Sciences, Ruppin Academic Center http://reco.ruppin.ac.il/eng/
Ayelet Dadon Pilosof	Quantification of biological filtration in the ocean at the phylotype level of the microbial prey	PhD	Amatzia Genin (IUI, HUJI)	2019	IUI Ph.D. award 2015 MERCI Scholarship 2016 Best lecture award IAAS 2016 MERCI Scholarship 2017 Publications in Nature Microbiology, Limnology and Oceanography Currently a faculty member at The Faculty for Marine Science, ruppin Academic Center
MSc Student					
Hadar Sedaka	Microphytoplankton Dynamics in a Hyper-eutrophic Micro-estuary and the Nearby Sea: , Diversity, and Biotoxins				
Liat Wiess	Uptake and transformations of dissolved organic matter by bivalves	MSc		In Progress	
Sasha Avriel	Evasive microalgae: Differential capture of microalgae species by bivalves	MSc	Ayelet Dadon Pilosof	In Progress	
Dan Golanski	In hot water: Quantifying the effect of marine heatwaves on marine ecosystems by tracking fish feeding rates and	MSc	Jonathan Bellmaker (TAU)	In Progress	

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	movement patterns				
Sharon Shperling	The effect of environmental conditions on Cyanophage production & decay	MSc	Debbie Lindell (Technion)	2024	
Neomi Darmon	Dissolved Inorganic Carbon (DIC) fluxes mediated by marine sponges	MSc	Eyal Wurgaft (Open University)	2024	Best lecture award, IAAS meeting 2022, Best Poster award IAAS meeting 2023 Publication in Biological Invasions
Rei Diga	The impact of invasive bivalves on Mediterranean rocky habitats	MSc	Jonathan Bellmaker (TAU)	2022	Publications in Biological invasions and Limnology and Oceanography
Raz Moskovich	In situ study of the metabolism of HMA and LMA sponges	MSc	Micha Ilan (TAU)	2020	Publication in Limnology and Oceanography
Merav Gilboa	Toward Quantification of biological resuspension rate	MSc	Adi Torfstain (HUJI)	2019	
Aviv Ben Tal	Ecology of feeding in Ascidians – Factors controlling the mucus net production	MSc	Noa Shenkar (TAU)	2018	Publications in Marine Biology and Marine Ecology Progress Series
Yuval Jacobi	Biomechanics and ecological aspects of Ascidian filtration	MSc	Noa Shenkar (TAU)	2016	Best Lecture award Microscale Ocean Biophysics 2016 Publications in Limnology and Oceanography

10. Miscellaneous

a. Military and civil service

1987-1989 Field Guide for the Society for Protection of Nature in Israel (SPNI) at the Mount Hermon Field School.

1986-2003, Major (on reserve duty) at the Airborne Rescue Squadron of the Israeli Air Force (Unit 669). Rescue Team commander.

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1982-1986, Airborne Rescue Squadron of the Israeli Air Force (Unit 669), last position – Rescue Team commander, discharged at the Rank of Captain.

As I started my academic studies only at the age of 28, my academic career is lagging behind my age.

12. Professional Experience

2012-Present: Environmental Impact Monitoring of the Herzliya sewage treatment plant outfall

2015-2020: Turbidity monitoring of the port construction work in Namal Hadarom, Ashdod.

2010: Evaluation of Environmental Impact Monitoring programs for the Ministry for Protection of the Environment

2006 Environmental Impacts of air-gun surveys on Glass Sponges for the Ministry of Energy and Mines, BC, Canada

Publications

A. Ph.D. Dissertation

Feeding on ultraplankton and dissolved organic carbon in coral reefs: from individual-based rates to community processes (2003) Submitted to the Hebrew University in Jerusalem under the supervision of Prof. Amatzia Genin.

All chapters were published (items no. 3, 4, 5, 7, 10, 12, and 19 in the publication list below).

D. Articles in Refereed Journals

English Publications

52. Darmon ND, Diga R, Marom R, Burgues I, Ribes M, Wurgaft E, Silverman J, Coma R, **Yahel G** (2025) Continuous determination of dissolved inorganic carbon fluxes from pumping suspension feeders. Limnology and Oceanography: Methods. https://doi.org/10.1002/lom3.10721

51. Amit T, Beninger PG, **Yahel G**, Loya Y (2024) Coral hosts provide more than shelter to boring bivalves. Ecology:e4376. DOI: 10.1002/ecy.4376

50. Golanski DB, Nachmias A, Kahn G, Fireman A, Hepner Ucko O, Shenkar N, **Yahel G** (In press) Massive colonization by the solitary ascidian Microcosmus exasperatus on the sandy bottom of the Israeli littoral. Aquatic Invasions.

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49. Suari Y, Topaz T, Bassa O, Gilboa M, Sedaka H, Chefetz B, **Yahel G** (2024) Nutrient concentration, loads and retention in a semiarid micro-estuary: The relative contribution of baseflow and flood events. Sci Total Environ. https://doi.org/10.1016/j.scitotenv.2024.172805

48. Topaz T, Ben-Ari J, Banchik EK, Bassa O, Egozi R, Suari Y, Sade T, Zedaka H, Gilboa M, **Yahel G**, Chefetz B (2023) Pesticides and pharmaceuticals data collected during two consecutive years in a Mediterranean micro-estuary. Data Brief 50:109456. https://doi.org/10.1016/j.dib.2023.109456

47. Amit, T., R. Moskovich, Y. Jacobi, S. E. Shumway, J. E. Ward, P. Beninger, **G. Yahel**, and Y. Loya. 2023. Feeding on the smallest cells: an in situ study of picoplankton capture by bivalve molluscs from oligotrophic waters. Front. Mar. Sci. 10. https://doi.org/10.3389/fmars.2023.1184773

46. Moskovich, R., Diga, R., Ilan, M., **Yahel, G**. High variability and enhanced nocturnal oxygen uptake in coral reef sponges. Limnol. Oceanogr. 1–13 (2023) https://doi.org/10.1002/lno.12361

45. Dadon-Pilosof, A., K. Conley, F. Lombard, K. R. Sutherland, A. Genin, M. Richter, F. O. Glöckner, and **G. Yahel**. (2023). Differential clearance rates of microbial phylotypes by four appendicularian species. Mar. Ecol. Prog. Ser. 706: 73–89. https://doi.org/10.3354/meps14233

44. Ribes M, **Yahel G**, Romera-Castillo C, Mallenco R, Morganti TM, Coma R (2023) The removal of dissolved organic matter by marine sponges is a function of its composition and concentration: An in situ seasonal study of four Mediterranean species. Sci Total Environ 871:161991. https://doi.org/10.1016/j.scitotenv.2023.161991

43. Diga R, Gilboa M, Moskovich R, Darmon N, Amit T, Belmaker J, **Yahel G** (2022) Invading bivalves replaced native Mediterranean bivalves, with little effect on the local benthic community. Biol Invasions:1–19. https:// doi.org/ 10. 1007/ s10530- 022- 02986-1

42 Leys SP, Matveev E, Suarez PA, Kahn AS, Asadzadeh SS, Kiørboe T, Larsen PS, Walther JH, **Yahel G** (2022) Models of flow through sponges must consider the sponge tissue. Nature 603:E23–E25. https://doi.org/10.1038/s41586-021-04380-8

41. Jacobi Y, Shenkar N, Ward EJ, Rosa M. Ramon GZ, Shavit U, **Yahel, G** (2021) Evasive plankton: Size-independent particle capture by ascidians. Limnology and Oceanography, 66(4), 1-12. https://doi.org/10.1002/lno.11658

40. Morganti TM, Ribes M, Moskovich R, Weisz J, **Yahel G**, Coma R (2021) The in situ pumping rates of 20 marine demosponges are a function of osculum area. Frontiers in Marine Science, 8:583188. https://doi.org/10.3389/fmars.2021.583188

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39. Ben-Tal A, Shenkar N, Paz A, Conley KR, Sutherland K, **Yahel G** (2021) High mucous-mesh production by the ascidian *Herdmania momus*. Marine Ecology Progress Series, 663:223-228. https://doi.org/10.3354/meps13631

38. Asadzadeh SS, Kiørboe T, Larsen PS, Leys SP, **Yahel G,** Walther JH (2020) Hydrodynamics of sponge pumps and evolution of the sponge body plan. Elife. 9, e61012. https://doi.org/10.7554/eLife.61012

37. Topaz T, Egozi R, Suari Y, Ben-Ari J, Sade T, Chefetz B, **Yahel G** (2020) Environmental risk dynamics of pesticides toxicity in a Mediterranean micro-estuary. Environmental Pollution 265, 114941. https://doi.org/10.1016/j.envpol.2020.114941

36. Suari Y, Dadon-Pilosof A, Sade T, Amit T, Gilboa M, Gafny S, Topaz T, Zedaka H, Boneh S, **Yahel G** (2019) A long term physical and biogeochemical database of a hyper-eutrophicated Mediterranean micro-estuary. Data in Brief 27, 104809.

35. Morganti TM, Ribes M, **Yahel G**, Coma R (2019) Size is the major determinant of pumping rates in marine sponges. Frontiers in Physiology 10, 1474.

34. Dadon-Pilosof A, Lombard F, Genin A, Sutherland KR, **Yahel G** (2019) Prey taxonomy rather than size determines salp diets. Limnol Oceanogr 64:1996–2010.

33. Suari Y, Amit T, Gilboa M, Sade T, Krom MD, Gafny S, Topaz T, **Yahel G** (2019) Sandbar breaches control of the biogeochemistry of a micro-estuary. Frontiers in Marine Science 6, 224.

32. Conley KR, Ben-Tal A, Jacobi Y, **Yahel G**, Sutherland K (2018) Not-so-simple sieving by ascidians: re-examining particle capture at the mesh and organismal scales. Marine Biology 165(3), 45.

31. Jacobi Y, **Yahel G**, Shenkar N (2018) Efficient filtration of micron and submicron particles by ascidians from oligotrophic waters. Limnology and Oceanography, 63(S1).

30.Morganti T, Coma R, **Yahel G**, Ribes M (2017) Trophic niche separation that facilitates co-existence of high and low microbial abundance sponges is revealed by in situ study of carbon and nitrogen fluxes. Limnology and Oceanography, 62(5), 1963-1983.

29. Dadon-Pilosof A, Conley K R, Jacobi Y, Haber M, Lombard F, Sutherland K R, Steindler L, Tikochinski Y, Richter M, Glöckner F O, Suzuki M T, West N J, Genin A, **Yahel G** (2017) Surface properties of SAR11 bacteria facilitate grazing avoidance. Nature Microbiology 2:1608-1615. https://doi.org/10.1038/s41564-017-0030-5

28. Lavy A, Keren R, **Yahel G**, Ilan M (2016) Intermittent hypoxia and prolonged suboxia measured in situ in a marine sponge. Frontiers in Marine Science 3:1–11.

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H. Preprints

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K. Submitted Publications

2. Darmon N, Diga R, Marom R, Burgues I, Ribes M, Wurgaft E, Silverman J, Coma R, Yahel G. Continuous determination of dissolved inorganic carbon fluxes from pumping suspension feeders. Limnol Oceanogr Methods.

1. Matveev E, Kahn AS, Eerkes-Medrano D, Ludeman DA, Suárez PA, **Yahel G**, Leys S (Under review). Active Use of Ambient Flow by a Deep-Sea Glass Sponge. Current Biology

Hebrew Publications

Suari Y, Shaish L, Gafny S, Amit T, Gilboa M, Brokovich E, **Yahel G** (2017) Prolonged anoxia in the Alexander estuary – a consequence of the interaction between seawater intrusions and high nutrients load. Ecology and Environment, 8, 44-52 (in Hebrew).

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L. Summary of my Activities and Future Plans

As a marine biologist and oceanographer by training, my research interests lie in the diverse processes linking the seafloor to the overlying ocean. These processes range from the ecophysiology and feeding of individual suspension feeders such as sponges, tunicates, and bivalves through the behavioral pattern of groundfish and plankton to the interplay between hydrodynamics and the benthos (organisms that inhabit the bottom of the sea). Due to the interdisciplinary nature of my work, I have developed strong collaborations over the years with several international groups from Spain, Canada, France, Denmark, and the USA, with whom I work and correspond on a weekly basis. Fieldwork and the development of new methods and instrumentation for underwater studies are major themes in my work, with the aim of providing the scientific community with tools to study marine organisms and processes in their natural habitat.

I devote my time and efforts to three missions: basic science, which is the core of my work, public and environmental scientific work, and providing strong scientific training to the next generation of environmental scientists and oceanographers through teaching and personal mentoring.

Basic Science - Currently, my group focuses on four major topics:

1. *The role of suspension-feeding metazoans in carbon cyclin*g: We use novel methodologies to study whether, how, and to what extent benthic suspension-feeders use DOM (dissolve organic matter, which is the largest pool of organic carbon in the ocean) and participate in its cycling. In this context, we also study *in-situ* respiration rates and DIC (dissolve inorganic matter) efflux by a range of benthic suspension feeders.
2. *The nutritional ecology of suspension feeders:* While bottom-up processes are intensively studied, grazing, the prominent mortality factor that shapes marine microbial food webs, is much less understood. In my lab, we focus on *in-situ* studies of grazing at the micron and sub-micron range and the biomechanical and biochemical mechanisms that facilitate differential and size-independent capture (or evasion) of planktonic microbes.
3. *Ecophysiology of suspension feeders:* We investigate the factors that control the metabolism and behavior of suspension feeders *in situ*, and how they are related to the size and allometry of modular suspension feeders such as sponges and colonial tunicates.
4. *Quantification of sediment resuspension by fish:* We work with an interdisciplinary group of geologists, engineers, and oceanographers to develop novel tools to estimate the average sediment fluxes due to biological resuspension and develop *in-situ* sensors to assist in constraining the fluxes of settling sediment.

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Public and Environmental work:
While keeping an active research lab with several technicians Ph.D. and MSc students, in the last decade (since 2013), I have devoted more than 50% of my time to local environmental issues and specifically to the heavily polluted micro-estuaries of the Israeli Mediterranean coast. What started as a student's exercise in the local estuary of the Alexander Stream has grown into a series of studies aimed at developing efficient monitoring, modeling, and management tools that will facilitate the rehabilitation of these important ecosystems. The next step was knowledge dissemination, targeting managers and decision-makers. To that end, we established the RECO- Ruppin Estuarine and Coastal Observatory, which has provided online information on the health of Israeli micro-estuaries since 2014. RECO has then transformed into the Israeli estuarine research center. During those years, we worked intensively with academia and local, regional, and national agencies to foster the idea that micro-estuaries are unique water bodies that are very different from coastal streams. Therefore, they require special status and management plans. This tedious work has culminated in the recent establishment of the Israeli Estuarine Research Center at Ruppin Academic Center. The center now monitors and studies several estuaries and streams in order to create science-based data and provide management recommendations for local managers and decision-makers. The center has four technicians and several MSc students, and my former Ph.D. student, Dr. Tom Topaz, now heads it.

My environmental work made me realize that sustainable rehabilitation of Israel's streams and micro-estuaries requires a national solution to the problem of wastewater surplus plaguing Israel's waste management system. To remediate this problem, we devised and proposed technical short-term fixes that are now being adopted and translated into policy and management actions at the national level.

Teaching and training the next generation of oceanographers and marine scientists is both a passion and an academic mission of mine. I do it in the classroom, but first and foremost at sea. Since my arrival, back in 2007, at the Faculty of Marine Science in Michmoret (the marine campus of Ruppin Academic Center, which is located in the central part of the Mediterranean coast of Israel), I took upon myself the task of promoting the teaching of quantitative and oceanographic skills at the Faculty. To that end, I arranged and headed over 70 educational oceanographic cruises. With my peers, I constantly refine the faculty's oceanographic curriculum to provide a combination of strong quantitative skills and intensive hands-on experience that is followed by advanced geochemical, biological, and molecular analysis training in the lab. I have also established and continue to develop the Scientific Diving Center, which is part of the AAUS network. The center is training tens of scientific divers every year, more than any other AAUS center in the world. Within this framework, I teach a selected group of graduates and undergraduates an intensive two-week course on advanced underwater research methods.

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